REMARKS

In view of the following remarks, Applicant respectfully requests reconsideration and allowance of the subject application. Claims 1-39 are original and pending.

Statement of Substance of Interview Dated January 8th, 2006

Applicant wishes to thank Examiners Saif Alhija and Jean Homere for conducting a telephonic interview with Applicant's attorney, Michael K. Colby, and an inventor, Efstathios Papaefstathiou, on January 8th, 2006.

During the interview, Applicant submitted differences between a paper by E. Papaeftstathiou, entitled "Design of Performance Technology Infrastructure to Support the Construction of Responsive Software", (Papaeftstathiou) and the claimed subject matter. Applicant submitted that the Papaefstathiou reference does not disclose the claimed workload definition sequence. For at least this reason Applicant submits that the Office has not established a *prima facie* case of anticipation for the pending claims.

Claim Rejections under 35 U.S.C. §102

Claims 1-39 stand rejected under 35 U.S.C. §102(b) as being anticipated by the Papaeftstathiou reference.

Applicant submits that the Office has failed to establish that the Papaeftstathiou reference discloses each and every element of claims 1-39. In view of the comments below, Applicant respectfully traverses the Office's rejections. Before discussing the substance of the Office's rejections, however, a

section entitled "The §102 Standard" is provided and will be used in addressing the Office's rejections.

The §102 Standard

Anticipation is a legal term of art. Applicant notes that in order to provide a valid finding of anticipation, several conditions must be met: (i) the reference must include each and every element as set forth in the claim (*Verdegaal Bros. v. Union Oil Co. of California,* 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); *and see* MPEP §2131); (ii) the pertinence of each reference must be clearly explained (MPEP §706, citing 37 CFR 1.104(c)(2)); and (iii) the teachings of the reference cannot be modified (*see* MPEP §706.02, stating that "No question of obviousness is present" in conjunction with anticipation).

Response to 35 U.S.C. §102 Rejections

Applicant respectfully submits that the Office has not established that the Papaeftstathiou reference anticipates the subject matter recited in the claims. The Office fails to show that each and every element of the claims is included in the Papaeftstathiou reference. The Office mentions portions of the Papaeftstathiou reference, but these portions do not describe each and every element of the claims.

Claims 1-17

Claim 1, original, recites a computer program product encoding a computer program for executing on a computer system a computer process for simulating performance of a software system including one or more resources, the computer process comprising:

- generating one or more workload definition sequences defining the software system, each workload definition sequence including a

plurality of workload request nodes, the workload definition sequence including at least two of the workload request nodes having a sequential relationship relative to different simulation intervals;

- receiving the workload definition sequence into an evaluation engine; and
- evaluating the one or more workload definition sequences to simulate the performance of the software system.

The Office asserts the following as its sole basis and argument for rejecting claim 1:

> **Papaeftstathiou** discloses a computer program product encoding a computer program for executing on a computer system a computer process for simulating performance of a software system including one or more resources, the computer process comprising:
>
> generating one or more workload definition sequences defining the software system, each workload definition sequence including a plurality of workload request nodes, the workload definition sequence including at least two of the workload request nodes having a sequential relationship relative to different simulation intervals; **(Page 97, Section 3.1. Figure 1, Events/Evaluation Directives)**
>
> receiving the workload definition sequence into an evaluation engine; **(Page 97, Section 3.1, Figure 1)**
>
> and evaluating the one or more workload definition sequences to simulate the performance of the software system. **(Page 97, Section 3.1, Figure 1)**

Office Action, pages 2-3, emphasis in original.

For the Office's convenience, Applicant sets forth the portion of the Papaeftstathiou reference relied on by the Office:

3.1 Architecture

The core architecture includes three components: 1. the Workload Specification Library (WSL), 2. the Evaluation Engine (EE), and 3. the hardware models. An overview of the PTI architecture is shown in Figure 1. The evaluation engine allows the combination of different workload specification and hardware model technologies into a single model.
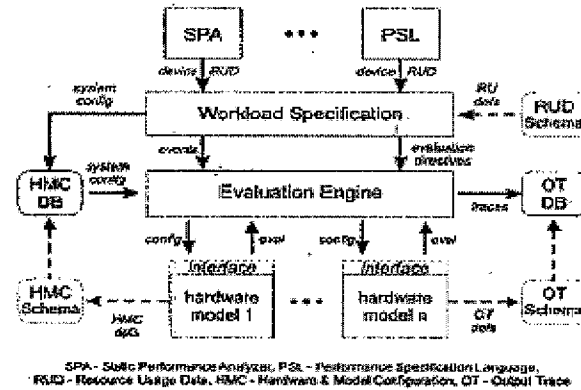

SPA- Static Performance Analyzer, PSL - Performance Specification Language, RUD - Resource Usage Data, HMC - Hardware & Model Configuration, OT - Output Trace

Figure 1 – Overview of performance technology infrastructure architecture

The workload is composed of a list of hardware or virtual device usage requests. Hardware devices represent system components (e.g. CPU) while virtual devices are typically associated with software libraries. For example, an application can use a message-passing library such as MPI to define a communication pattern. The workload also defines the type of model that should be used to predict the delay for using the device. A single device can be modeled by many underlying hardware models. Depending on the requirements of the performance study, a specific model might be selected for a type of device. For example, the speed of evaluation

Papaeftstathiou, section 3.1 (pp. 97-98), and figure 1.

Applicant submits that the Office fails to establish that the following portions of claim 1 are anticipated: "generating one or more workload definition sequences defining the software system"; "each workload definition sequence including a plurality of workload request nodes"; "the workload definition sequence including at least two of the workload request nodes having a sequential relationship relative to different simulation intervals"; "receiving the workload definition sequence into an evaluation engine"; and "evaluating the one or more

workload definition sequences to simulate the performance of the software system". *Claim 1*, all emphases added.

For example, the portion of the reference relied on by the Office simply does not disclose a workload definition sequence having any sort of sequential relationship of request nodes. The Office has not show that the Papaeftstathiou reference discloses sequences, timing, and any sort of chronology related to the claimed workload definition sequence.

Applicant respectfully asserts that such deficiencies in the Office's argument extend throughout the Action, and therefore the Office has failed to state a *prima facie* case of anticipation for any of Applicant's claims 1-39. If the Office intends to maintain these rejections, Applicant asks that the Office clarify how the Papaeftstathiou reference serves to anticipate the elements of Applicant's claims.

Claims 2-17 depend from claim 1 and are allowable by virtue of this dependency. Moreover, these claims recite features that, when taken together with those of claim 1, define features not disclosed by the Papaeftstathiou reference.

Claims 18-29

Claim 18, original, recites a performance simulation system for simulating performance of a software system, the performance simulation system comprising:

- a workload generator generating one or more workload definition sequences defining the software system, each workload definition sequence including a plurality of workload request nodes, the workload definition sequence including at least two of the workload request nodes having a sequential relationship relative to different simulation intervals; and
- an evaluation engine receiving the one or more workload simulation sequences and evaluating the one or more workload definition sequences to simulate the performance of the software system.

The Office relies on exactly the same citation and argument used in rejecting claim 1 to reject claim 18. *See Office Action,* pages 2-3. This argument fails to establish a *prima facie* case of anticipation for claim 18 for at least one of the reasons noted above with regard to claim 1. Further, the Office fails to establish a *prima facie* case of anticipation by failing to use the language of claim 18 in making out its rejection. For example, the Office makes no mention of "a workload generator", which is required by claim 18. This failure, in and of itself, renders the Office's rejection of claim 18 legally insufficient.

Applicant respectfully asserts that the Office fails to establish a *prima facie* case of anticipation for claim 18 for any of the above-noted reasons. Claims 19-29 depend from claim 18 and are allowable by virtue of this dependency. Moreover, these claims recite features that, when taken together with those of claim 18, define features not disclosed by the Papaeftstathiou reference.

Claims 30-39

Claim 30, original, recites a method of simulating performance of a software system including one or more resources, the method comprising:
- generating one or more workload definition sequences defining the software system, each workload definition sequence including a plurality of workload request nodes, the workload definition sequence including at least two of the workload request nodes having a sequential relationship relative to different simulation intervals;
- receiving the workload definition sequence into an evaluation engine; and
- evaluating the one or more workload definition sequences to simulate the performance of the software system.

The Office relies on exactly the same citation and argument used in rejecting claim 1 to reject claim 30. *See Office Action,* pages 2-3. This argument

fails to establish a *prima facie* case of anticipation for claim 30 for at least one of the reasons noted above with regard to claim 1.

Claims 31-39 depend from claim 30 and are allowable by virtue of this dependency. Moreover, these claims recite features that, when taken together with those of claim 30, define features not disclosed by the Papaeftstathiou reference.

Conclusion

Claims 1-39 are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of the subject application. If any issue remains unresolved that would prevent allowance of this case, the Examiner is requested to contact the undersigned attorney to resolve the issue.

Respectfully Submitted,

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